

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

In the Matter of the Application of San Diego Gas & Electric Company (U902E) for Adoption of its Smart Grid Deployment Plan.	A.11-06-006 (Filed June 6, 2011)
In the Matter of the Application of Pacific Gas & Electric Company (U39E)) for Adoption of its Smart Grid Deployment Plan.	A.11-06-029 (Filed June 30, 2011)
In the Matter of the Application of Southern California Edison Company (U338E) for Approval of its Smart Grid Deployment Plan.	A.11-07-001 (Filed July 1, 2011)

**PROTEST OF
THE DIVISION OF RATEPAYER ADVOCATES**

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Pursuant to Rule 2.6 of the Commission’s Rules of Practice and Procedure, the Division of Ratepayer Advocates (“DRA”) submits its protest to San Diego Gas & Electric Company’s (“SDG&E”), Pacific Gas and Electric Company’s (PG&E), and Southern California Edison Company’s (“SCE”) applications for approval of their respective Smart Grid Deployment Plans. SDG&E filed its application on June 6, 2011, PG&E on June 30, 2011, and SCE on July 1, 2011. On July 14, 2011, Administrative Law Judge (“ALJ”) Sullivan notified parties via electronic mail, granting DRA’s motion to consolidate the three applications. Responses and protests are due filed on August 4, 2011; thus, DRA’s protest is timely.

I. IDENTIFIED ISSUES

The applications seek adoption of each investor-owned utility's (IOU) Smart Grid Deployment Plan, filed pursuant to Senate Bill (SB) 17 and Decision (D.) 10-06-047. DRA preliminarily reviewed the deployment plans and it appears that each application includes the basic requirements outlined in D.10-06-047. However, DRA is still reviewing the utilities' lengthy deployment plans, and will address concerns that may arise throughout the course of this proceeding. At this time, DRA's key points are as follows:

- The IOUs seek adoption of deployment plans and do not make any specific funding requests. Specific funding requests will be made through either separate applications or general rate cases (GRCs).
- Most of the estimated benefits are environmental or societal benefits and are not quantified. When specific funding requests are made, the IOUs should include fully-quantified cost-benefits analyses including rate impacts, any non-rate-related customer cost impacts, and a demonstration of need. If environmental and societal benefits are included, they should be presented as a range (i.e., low and high cases), with the underlying assumptions clearly stated.
- DRA supports technical workshops at the start of the proceeding, with a determination of whether hearings are warranted after the technical workshops have concluded.
- The proceeding should also determine how best to update the IOUs' deployment plans, including a mechanism to gauge whether, and to what extent, purported benefits are being achieved.

A. Approval of Deployment Plans Only

SCE states that its Application should "be read as provisional guidance" regarding Smart Grid investments over the next ten years, that the described technologies and costs and benefits are likely to change in the future, and that the

deployment plan must be “viewed by the Commission, SCE, and other stakeholders as a living document whose assumptions and conclusions will necessarily have to be modified and updated over time.”¹ SCE additionally recognizes that “[a]lso consistent with the guidance in the Decision [D.10-06-047], the Deployment Plan should not be viewed as a request for approval of any of the projects described therein.”² DRA agrees, and points out that this is applicable for all three Applications.

As directed in D.10-06-047, specific funding requests must be made through either applications or general rate cases.³ Further, DRA asserts that projects for which the IOUs are requesting funding must be shown to be cost-effective.

B. Costs and Benefits

The cost ranges for Smart Grid estimated in the IOU deployment plans are quite large. SDG&E’s estimated costs of Smart Grid deployments for years 2006-2020 are approximately \$3.5 to \$3.6 billion. Most of those estimated costs are attributed to previously authorized investments (such as smart meters and Operational Excellence 20/20), funding requests in SDG&E’s 2012 GRC, and other current applications (such as Demand Response and Dynamic Pricing).⁴

PG&E’s estimated costs of Smart Grid deployments are approximately \$800 million to \$1.25 billion in incremental capital investments and \$500 million to \$700 million in cumulative operating expenses over an average project life of 20 years, with conceptual cost estimates focused on the next five years.⁵ PG&E’s

¹ “Application of Southern California Edison Company (U-338-E) for Approval of its Smart Grid Deployment Plan” (SCE Application) at 5.

² *Ibid.*

³ D.10-06-047 at 22 and Ordering Paragraph 14.

⁴ “Smart Grid Deployment Plan Application of San Diego Gas & Electric Company (U 902 E)” (SDG&E Application), Attachment A at 8 and 268.

⁵ “Smart Grid Deployment Plan of Pacific Gas and Electric Company (U 39 E)” (PG&E Application), Appendix A at 7 and 154-155.

estimates do not appear to include projects already approved (such as smart meters).

SCE's estimated costs of Smart Grid deployments are approximately \$1.870 billion through 2014, and do not include previously approved funding for smart meter deployment.⁶ For the 2014-2020 period, SCE provides some provisional forecasts with a range of +/- 45 percent, but is not able to provide provisional forecasts for the bulk of the projects in that time period. The provisional forecasts range from \$469 million to \$1.197 billion.⁷

The ranges of estimated benefits provided in the deployment plans are likewise quite large. PG&E estimates customer energy cost savings between \$600 million and \$1.4 billion, avoided or deferred future capital costs between \$240 million and \$360 million, and avoided operations and maintenance costs between \$140 million and \$195 million. PG&E also estimates additional non-monetary benefits that include reduced greenhouse gas emissions of 1.4 million to 2.1 million tons of CO₂e, and improved system reliability of 10 to 20 percent.⁸

SDG&E estimates benefits between \$3.8 and \$7.1 billion, which includes societal and environmental benefits between \$760 million and \$1.9 billion, and economic and reliability benefits between \$3.0 and \$5.1 billion. The societal and environmental benefits are mostly due to avoided emissions and fuel costs due to renewable integration and plug-in electric vehicles. The economic and reliability benefits result from previously authorized investments such as smart meters, SDG&E's 2012 GRC requests, other pending applications, and incremental investments.⁹

SCE provides a description of potential benefits it expects to achieve, without assigning a monetary value to those benefits. Further, SCE divides its

⁶ SCE Application, Exhibit 1 at 9 and 125-127.

⁷ *Id.*, at 125 and 128-129.

⁸ PG&E Application, Appendix A at 169.

⁹ SDG&E Application, Attachment A at 8 and 289.

discussion of Smart Grid infrastructure deployments between platform and incremental infrastructure. SCE does not apply a direct cost/benefit analysis to any of the platform infrastructure investments, since SCE views those investments “in terms of preserving options with respect to future incremental investments and avoiding future integration costs.”¹⁰

While realizing that benefits presented in the IOU Smart Grid deployment plans are meant to be provisional estimates, DRA is concerned both at the large range and qualitative nature of the estimated benefits. For example, SDG&E states that:

Because the majority of benefits derive from maintaining and/or improving reliability in the face of a more complex grid, avoided costs, reduction of commodity cost, environmental and other societal and ‘soft’ benefits, they minimally reduce operating costs and so are not projected to significantly impact rates.¹¹

SDG&E also states that while costs are estimated through 2020, estimated benefits will accrue after 2020.¹²

Such provisional estimates may be appropriate for Smart Grid deployment plans as they are forecasts based on the best available information. However, the Commission should ensure that when the IOUs make specific funding requests, they include comprehensive cost-benefit analyses that mainly rely on quantitative benefits and only include new incremental benefits. Further, the Commission should direct the IOUs to submit “hard” cost-benefit analyses that include customer costs and rate impacts but exclude the “soft” environmental and other societal benefits. If the IOUs wish to estimate “soft” benefits, such benefits should be presented separately as a range based on well-documented assumptions. If specific Smart Grid projects are not cost-effective based on “hard” costs and

¹⁰ SCE Application, Exhibit 1 at 130.

¹¹ SDG&E Application, Attachment A at 8.

¹² *Id* at 9.

benefits, then the IOU must demonstrate that the soft benefits are sufficient to overcome any insufficiency of “hard” benefits.

Many components of the Smart Grid will work interactively and rely on customer participation, creating situations where it may be difficult to determine actual benefits directly resulting from incremental funding requests. The Commission should take this uncertainty into account when considering actual Smart Grid project implementation plans. For example, it may be prudent in some cases to begin with a pilot project or a phased implementation with “offramps,” in case customer participation is less than expected or benefits fail to materialize for other unanticipated reasons.

As mentioned above, DRA agrees with SCE that deployment plans should be “viewed by the Commission, SCE, and other stakeholders as a living document whose assumptions and conclusions will necessarily have to be modified and updated over time.” In that spirit, the cost-benefit analyses justifying specific SG project funding proposals should reflect the best information available at the time, including an updated assessment of near-term and intermediate term market conditions (which impact project benefits). Multiyear project implementation schedules should be designed with milestones to track progress, as well as “offramps” to reflect possible changes in market conditions.

Finally, as part of the cost-benefit analyses, the IOUs should use transparent mechanisms to measure cost-effectiveness. To the extent possible, the IOUs shall conduct cost-effectiveness analyses using relevant and existing models, such as the model used in the Standard Practice Manual for Energy Efficiency and the Demand Response Template provided by Energy Division and the consulting firm, Energy and Environmental Economics (E3), in R.07-01-041.¹³

¹³ 2010 Demand Response Cost Effectiveness Protocols

C. Technical Workshops

Both PG&E¹⁴ and SCE¹⁵ propose workshops, and DRA agrees. However, PG&E proposes workshops after comments are served whereas SCE proposes workshops prior to any rounds of comments. DRA recommends that a series of technical workshops should be held prior to any rounds of comments. This way, the IOUs can each present their deployment plans and technical experts can participate in discussion. Such process will help expedite and streamline the discovery process and enable the plans to be compared in one setting. Workshops should be grouped by the main categories in the deployment plans.

Further, workshops can assist in determination of whether hearings are necessary. There may be certain technical matters discussed in workshops that merit testimony and evidentiary hearings. This can best be determined after the workshops are held.

D. Deployment Plan Update Mechanism

The Commission should determine how deployment plans should be updated as a part of this proceeding. This was clearly the Commission's intention, as stated in D.10-06-047:

At this time, we conclude that the best way for the Commission to proceed is to review the first Smart Grid Deployment Plan for each utility, as discussed above, and as part of that proceeding, we will address when and how an update should be filed.¹⁶

As part of that determination, the Commission should consider developing a backward-looking mechanism to determine the achieved benefit and actual cost of Smart Grid projects once they are implemented. Since Smart Grid is comprised of so many nascent technologies, with much anticipated research and development, the Commission should track expenditures to ensure the utilities

¹⁴ PG&E Application at 3.

¹⁵ SCE Application at 8.

¹⁶ D.10-06-047 at 93-94.

wisely and prudently treat ratepayer investments. That way, if necessary, course-corrective action can be taken. At the time deployment plans are updated, such a mechanism will enable the IOUs and the Commission to track and logically determine adjustments.

II. PROPOSED SCHEDULE

DRA does not propose a specific schedule at this point, but makes the following recommendations:

- Prehearing conference (PHC) statements should be allowed and filed prior the PHC set on September 7, 2011;
- Technical workshops should be held in late September and October 2011, prior to any rounds of briefs or testimony;
- Need for hearings should be determined after technical workshops;
- It may be necessary to hold a secondary Prehearing Conference or issue a Scoping Memo after the technical workshops.

DRA will offer further input on scheduling at the Prehearing Conference.

Respectfully submitted,

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